Amendments to the Claims:

This listing of claims replaces all prior listings, and versions, of claims in the present application.

Listing of Claims:

1. (Currently amended) ~~In a communication system having~~ Apparatus for a first communication station operable to transmit data upon a communication channel, ~~susceptible to fading, an improvement of~~ said apparatus for dynamically selecting at least a first switching threshold used in selection of a modulation parameter, said apparatus comprising:

a calculator ~~coupled~~ adapted to receive indications of a selected communication indicia associated with communication characteristics of the communication channel during a selected interval, said calculator configured to select ~~for selecting~~ the at least the first switching threshold, the first switching threshold changeable responsive to changes in the selected communication indicia, and the first switching threshold selected by said calculator to at least satisfy a first performance criteria and to satisfy at least a second performance criteria.

2. (Original) The apparatus of claim 1 wherein selection of the first switching threshold by said calculator maximizes the first performance criteria while also satisfying the at least the second performance criteria.

3. (Original) The apparatus of claim 1 wherein the selected communication indicia to which said calculator is coupled to receive indications thereof comprises error indicia representative of errors introduced upon the data during communication upon the communication channel.

4. (Original) The apparatus of claim 3 wherein the data comprises frame-formatted data and wherein the error indicia to which said calculator is coupled to receive comprises a frame error rate (FER) indication.

5. (Original) The apparatus of claim 1 wherein the data transmitted by the first communication station is transmitted to a second communication station, wherein the second communication station is coupled in a feedback arrangement with the first communication to return to the first communication station a report representative of the communication characteristics of the communication channel, and wherein the selected communication indicia to which said calculator is coupled to receive is based upon the report returned to the first communication station.

6. (Original) The apparatus of claim 5 wherein the data transmitted by the first communication station is formatted into a plurality of data frames which are successively transmitted upon the communication channel, the plurality including a previously-transmitted data frame and a subsequent data frame, the report returned to the first communication station subsequent to reception of the previously-transmitted frame and wherein the first switching threshold selected by said calculator is selected, and the modulation parameter selected therefrom is selected, prior to transmission of the subsequent data frame by the first communication station.

7. (Original) The apparatus of claim 6 wherein the selected communication indicia to which said calculator is coupled to receive indications thereof comprises throughput indicia representative of a throughput rate at which the plurality of data frames are transmitted on the communication channel.

8. (Original) The apparatus of claim 7 wherein the selected communication indicia to which said calculator is coupled to receive indications thereof further comprises a frame error rate (FER) indication, the throughput rate being negatively related to the FER indication.

9. (Original) The apparatus of claim 1 further comprising a modulation parameter selector coupled to said calculator, said modulation parameter selector for selecting the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel.

10. (Original) The apparatus of claim 9 wherein the modulation parameter comprises a modulation-type by which the data is modulated by the first communication station.

11. (Original) The apparatus of claim 9 wherein the modulation parameter comprises an encoding rate by which the data is encoded by the first communication station.

12. (Cancelled)

13. (Currently amended) The apparatus of claim ~~12~~ 1 wherein said calculator comprises a processor having an enhanced linear-reward-inaction (LRI) learning algorithm executable thereat and in which the selected communication indicia form inputs to the LRI algorithm.

14. (Currently amended) The apparatus of claim ~~13~~ 21 wherein the inputs formed of the selected communication indicia comprise teaching inputs to the LRI.

15. (Original) The apparatus of claim 14 wherein the teaching inputs comprise an indication related to the first performance criteria and an indication related to the second performance criteria.

16. (Currently amended) ~~In a~~ A method for communicating data by ~~in a communication system having~~ a first communication station ~~operable to transmit data~~ upon a communication, ~~channel susceptible to fading, an improvement of apparatus~~ said method for dynamically selecting at least a first switching threshold used in selection of a modulation parameter, said ~~apparatus~~ method comprising:

selecting the at least the first switching threshold responsive to indications of a selected communication indicia associated with communication characteristics of the communication channel during a selected interval, the first switching threshold selected to at least satisfy a first performance criteria and to satisfy at least a second performance criteria; ~~and~~

selecting the modulation parameter by which the data is operated upon by the first communication station prior to transmission upon the communication channel[.];

changing the at least the first switching threshold responsive to changes in the indications of the selected communication indicia; and

selectably changing the modulation parameter responsive to changes in the at least the first switching threshold.

17. (Original) The method of claim 16 wherein the first switching threshold selected during said operation of selecting the at least the first switching threshold maximizes the first performance criteria while also satisfying the at least the second performance criteria.

18. (Original) The method of claim 16 wherein the first communication station comprises a processor and wherein said operation of selecting the at least the first switching threshold is performed by executing an algorithm at the processor.

19. (Original) The method of claim 18 wherein the algorithm comprises a enhanced linear-reward-inaction (LRI) learning algorithm in which the selected communication indicia form inputs to the LRI algorithm.

20. (Original) The method of claim 19 wherein the inputs to the LRI algorithm comprise a first indication related to the first performance criteria and a second indication related to the second performance criteria.

21. (New) Apparatus for a first communication station operable to transmit data upon a communication channel, said apparatus for dynamically selecting at least a first switching threshold used in selection of a modulation parameter, said apparatus comprising:

a processor having a linear-reward-inaction (LRI) learning algorithm executable thereat and couple to receive indications of a selected communication indicia associated with communication characteristics of the communication channel during a selected interval, said linear-reward-inaction learning algorithm configured to select the at least the first switching threshold, the first switching threshold selected by said linear-reward-inaction learning algorithm to at least satisfy a first performance criteria and to satisfy at least a second performance criteria.